

We claim:

1. A method for calculating a cost of receiving multicast data from a multicast session, a multicast network including at least one multicast service, each multicast service including at least one multicast session, comprising:
 - receiving a request to establish a connection to the multicast session, the request including a start time for the connection and an end time for the connection;
 - storing the start time for the connection and the end time for the connection; and
 - after termination of the connection, calculating the cost of receiving the multicast data.
2. The method of claim 1, further comprising:
 - receiving a subsequent request to extend the connection, the subsequent request specifying a new end time for the connection; and
 - storing the new end time for the connection.
3. The method of claim 1, further comprising:
 - receiving a subsequent request to terminate the connection, the subsequent request specifying a new end time that precedes the end time for the connection; and
 - storing the new end time for the connection.
4. The method of claim 1, wherein the storing of the start time for the connection and the end time for the connection is to a database.
5. The method of claim 1, wherein the calculating of the cost further comprises:

2 computing a charge for receiving the multicast data;
3 storing the charge; and
4 computing the cost by multiplying the charge by a fee for the multicast service associated
5 with the multicast session.

1 6. The method of claim 5, wherein the computing of the charge further comprises:
2 computing an elapsed connection time by subtracting the start time for the connection from
3 the end time for the connection.

1 7. The method of claim 5, wherein the computing of the charge further comprises:
2 computing a volume of data received over the connection from the start time for the
3 connection to the end time for the connection.

1 8. The method of claim 5, wherein the storing of the charge is to a database.

1 9. The method of claim 1, wherein time is divided into evenly spaced time slots, and wherein
2 the start time for the connection the end time for the connection can only occur at the end of a time
3 slot.

1 10. The method of claim 9, wherein the end time for the connection in the request is specified as
2 a discrete number of time slots.

1 11. A system for calculating a cost of receiving multicast data from a multicast session, a

multicast network including at least one multicast service, each multicast service including at least one multicast session, comprising:

a memory device; and

a processor disposed in communication with the memory device, the processor configured to:

receive a request to establish a connection to the multicast session, the request

including a start time for the connection and an end time for the connection;

store the start time for the connection and the end time for the connection; and

after termination of the connection, calculate the cost of receiving the multicast data.

12. The system of claim 11, wherein the processor is further configured to:

receive a subsequent request to extend the connection, the subsequent request specifying a new end time for the connection; and

store the new end time for the connection.

13. The system of claim 11, wherein the processor is further configured to:

receive a subsequent request to terminate the connection, the subsequent request specifying a new end time that precedes the end time for the connection; and

store the new end time for the connection.

14. The system of claim 11, wherein the processor stores the start time for the connection and

the end time for the connection to a database.

1 15. The system of claim 11, wherein to calculate the cost, the processor is further configured to:
2 compute a charge for receiving the multicast data;
3 store the charge; and
4 compute the cost by multiplying the charge by a fee for the multicast service associated with
5 the multicast session.

1 16. The system of claim 15, wherein to compute the charge, the processor is further configured
2 to:
3 compute an elapsed connection time by subtracting the start time for the connection from
4 the end time for the connection.

1 17. The system of claim 15, wherein to compute the charge, the processor is further configured
2 to:
3 compute a volume of data received over the connection from the start time for the
4 connection to the end time for the connection.

1 18. The system of claim 15, wherein the processor stores the charge to a database.

1 19. The system of claim 11, wherein time is divided into evenly spaced time slots, and wherein
2 the start time for the connection the end time for the connection can only occur at the end of a time
3 slot.

1 20. The system of claim 19, wherein the end time for the connection in the request is specified

2 as a discrete number of time slots.

1 21. A computer program product for calculating a cost of receiving multicast data from a
2 multicast session, a multicast network including at least one multicast service, each multicast
3 service including at least one multicast session, comprising:
4 a computer readable medium;
5 program code in said computer readable medium for receiving a request to establish a
6 connection to the multicast session, the request including a start time for the connection and an end
7 time for the connection;
8 program code in said computer readable medium for storing the start time for the connection
9 and the end time for the connection; and
10 after termination of the connection, program code in said computer readable medium for
11 calculating the cost of receiving the multicast data.

1 22. The computer readable medium of claim 21, further comprising:
2 program code in said computer readable medium for receiving a subsequent request to
3 extend the connection, the subsequent request specifying a new end time for the connection; and
4 program code in said computer readable medium for storing the new end time for the
5 connection.

1 23. The computer readable medium of claim 21, further comprising:
2 program code in said computer readable medium for receiving a subsequent request to
3 terminate the connection, the subsequent request specifying a new end time that precedes the end

4 time for the connection; and

5 program code in said computer readable medium for storing the new end time for the
6 connection.

1 24. The computer readable medium of claim 21, wherein the storing of the start time for the
2 connection and the end time for the connection is to a database.

1 25. The computer readable medium of claim 21, wherein the program code in said computer
2 readable medium for calculating the cost further comprises:

3 program code in said computer readable medium for computing a charge for receiving the
4 multicast data;

5 program code in said computer readable medium for storing the charge; and

6 program code in said computer readable medium for computing the cost by multiplying the
7 charge by a fee for the multicast service associated with the multicast session.

1 26. The computer readable medium of claim 25, wherein the program code in said computer
2 readable medium for computing the charge further comprises:

3 program code in said computer readable medium for computing an elapsed connection time
4 by subtracting the start time for the connection from the end time for the connection.

1 27. The computer readable medium of claim 25, wherein the program code in said computer
2 readable medium for computing the charge further comprises:

3 program code in said computer readable medium for computing a volume of data received

4 over the connection from the start time for the connection to the end time for the connection.

1 28. The computer readable medium of claim 25, wherein the storing of the charge is to a
2 database.

1 29. The computer readable medium of claim 21, wherein time is divided into evenly spaced
2 time slots, and wherein the start time for the connection the end time for the connection can only
3 occur at the end of a time slot.

1 30. The computer readable medium of claim 29, wherein the end time for the connection in the
2 request is specified as a discrete number of time slots.

1 31. A system for calculating a cost of receiving multicast data from a multicast session, a
2 multicast network including at least one multicast service, each multicast service including at least
3 one multicast session, comprising:

4 a collection device comprising:

5 a collection memory device; and

6 a collection processor disposed in communication with the collection memory
7 device, the collection processor configured to:

8 receive a request to establish a connection to the multicast session, the

9 request including a start time for the connection and an end time for the connection;

10 store the start time for the connection and the end time for the connection;

11 and

12 after termination of the connection, calculate the cost of receiving the
13 multicast data; and
14 an interface device comprising:
15 an interface memory device; and
16 an interface processor disposed in communication with the interface memory device,
17 the interface processor configured to:
18 configure the collection device; and
19 display the cost of receiving the multicast data.

1 32. The system of claim 31, wherein the collection processor is further configured to:
2 receive a subsequent request to extend the connection that specifies a new end time for the
3 connection; and
4 store the new end time for the connection

1 33. The system of claim 31, wherein the collection processor is further configured to:
2 receive a subsequent request to terminate the connection that specifies a new end time for
3 the connection; and
4 store the new end time for the connection.

1 34. The system of claim 31, wherein the collection processor stores the start time for the
2 connection and the end time for the connection to a database.

1 35. The system of claim 31, wherein to calculate the cost, the collection processor is further

configured to:

compute a charge for receiving the multicast data;

store the charge; and

compute the cost by multiplying the charge by a fee for the multicast service associated with the multicast session.

36. The system of claim 35, wherein to compute the charge, the collection processor is further configured to:

compute an elapsed connection time by subtracting the start time for the connection from the end time for the connection.

37. The system of claim 35, wherein to compute the charge, the collection processor is further configured to:

compute a volume of data received over the connection from the start time for the connection to the end time for the connection.

38. The system of claim 35, wherein the collection processor stores the charge to a database.

39. The system of claim 31, wherein time is divided into evenly spaced time slots, and wherein the start time for the connection the end time for the connection can only occur at the end of a time slot.

40. The system of claim 39, wherein the end time for the connection in the request is specified

2 as a discrete number of time slots.

1 41. An apparatus for calculating a cost of receiving multicast data from a multicast session, a
2 multicast network including at least one multicast service, each multicast service including at least
3 one multicast session, comprising:

4 a computer readable medium;

5 program code in said computer readable medium for sending a request to establish a
6 connection to the multicast session, the request including a start time for the connection and an end
7 time for the connection;

8 program code in said computer readable medium for sending a first subsequent request after
9 the request, the first subsequent request including a new end time for the connection, the new end
10 time being later than the end time; and

11 program code in said computer readable medium for sending a second subsequent request
12 after the first subsequent request, the second subsequent request including an earlier end time for the
13 connection, the earlier end time after the end time and before the new end time.

1 42. The apparatus of claim 41, further comprising:

2 program code in said computer readable medium for determining a request time interval;

3 wherein sending the request, sending the first subsequent request, and sending the second

4 subsequent request only occur at a time that is a multiple of the request time interval from the start

5 time.